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FILED
U.S. DISTRICT COURT
DISTRICT OF WYOMING
AUG 15 2005
4:26pm
Stephan Harris, Clerk
Cheyenne

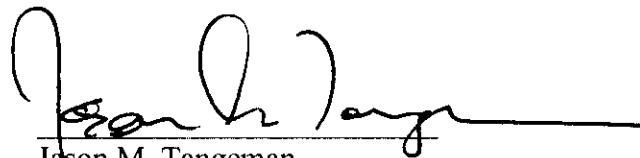
**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF WYOMING**

Biodiversity Conservation Alliance and)	
Sierra Club,)	
)	
Plaintiffs,)	Case No. 04CV 361-B
)	
v.)	
Mountain Cement Company,)	
)	
Defendant.)	

**EXPERT WITNESS REPORT OF ROGER BROWER ON BEHALF OF
THE DEFENDANT MOUNTAIN CEMENT COMPANY**

Defendant Mountain Cement Company files the attached expert witness report of Roger Brower, and pursuant to the Court's Unopposed Motion and Stipulated Order Extending Deadlines in Amended Order On Initial Pretrial Conference.

DATED this 15th day of August, 2005.



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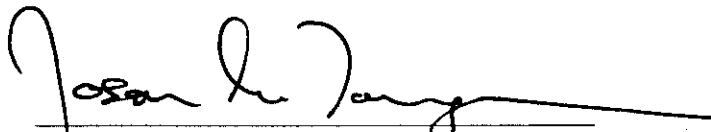
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CERTIFICATE OF SERVICE

I, Jason M. Tangeman, certify that a copy of the above and foregoing pleading was served on Plaintiffs by placing a copy of the same in the U.S. Mail, postage prepaid and addressed as follows on August 15th, 2005:

Reed Zars
Attorney at Law
910 Kearney Street
Laramie, WY 82070


Jason M. Tangeman

))))))))))

**EXPERT REPORT OF ROGER BROWER
ON BEHALF OF DEFENDANT**

- 1 -

- Replacing an ESP with a fabric filter system would not be efficient or cost-effective because both technologies provide comparable expected control of particulate matter.
- Mountain Cement Company's Operating Permit requires stack tests using EPA Method 5 to ensure compliance with permitted particulate emissions limits. Stack tests at Mountain Cement Kiln #2 confirm that the Kiln #2 ESP can and does effectively control particulate matter emissions to below the permit allowable limits.
- Stack tests have been performed by Mountain Cement to determine the PM emissions from the Kiln #2 stack. All stack test results for Kiln #2 are below the permit limits for particulate matter.
- The U.S. EPA has found that the Laramie, Wyoming area and the Albany County, Wyoming area have had and continue to have air quality levels that meet the National Air Quality Standards (NAAQS) for PM₁₀, particulate matter with a diameter of 10 microns or less. The NAAQS are set to protect public health and welfare. There is an annual standard and a 24-hr standard for PM₁₀. For decades the particulate matter air quality has been monitored in Laramie, Wyoming. Monitoring is comprehensive, being enhanced by two additional monitoring sites near Mountain Cement. The ambient air quality monitoring data in Laramie Wyoming and near the Mountain Cement facility has demonstrated compliance with the annual PM₁₀ NAAQS. Only one daily value above the 150 $\mu\text{g}/\text{m}^3$ 24-hr PM₁₀ NAAQS concentration level has been reported (concentration of 233 $\mu\text{g}/\text{m}^3$ on December 16, 2002) over the six years (1999 through 2004) of monitoring data reviewed. The 24-hr PM₁₀ NAAQS allows one exceedance of the prescribed air concentration per year.
- With respect to the one daily measured value above the 24-hr PM₁₀ NAAQS concentration level (on December 16, 2002), the Wyoming Department of Environmental Quality (Wyoming DEQ) indicated that this measured level was due to a high wind event. Under U.S. EPA policy, data during uncontrollable natural events, such as high wind events, should be discounted in decisions regarding the attainment of the PM₁₀ NAAQS. On December 16, 2002, Mountain Cement's excess opacity values for Kiln #2 were just above 20% opacity and infrequent: only five 6-minute periods during the day had excess opacity values, and these values were only between 20% and 30% opacity (there were no excess opacity values for the clinker cooler on this day). PM₁₀ monitoring data have indicated ambient concentration levels below the PM₁₀ NAAQS level even on days when Mountain Cement's excess opacity values were higher and more frequent.
- Based on my review of the PM₁₀ ambient monitoring data and Mountain Cement Company's excess opacity reports for Kiln #2, it is my opinion that the stack emissions associated with excess opacity have not caused a violation of the PM₁₀

NAAQS, and that these emissions have not threatened the PM₁₀ air quality in the Laramie Wyoming area.

- Mountain Cement follows the WAQSR Chapter 7, Section 3 Compliance Assurance Monitoring (CAM) Requirements given in Operating Permit 31-098. Mountain Cement's CAM plan, like all CAM plans, is established to provide effective monitoring and performance evaluation of pollution control equipment.

2. Bases for Opinions and Estimations

- In its analysis for developing the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement industry, the U.S. EPA found that "All kiln exhaust gases are controlled at the existing plants by either [fabric filters] or ESPs to limit PM emissions." (*National Emission Standards for Hazardous Air Pollutants; Proposed Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry; Proposed Rule*, 63FR14192, March 24, 1998).
- In its response to comments on the proposed Portland Cement NESHAP, the U.S. EPA stated that "...it should be noted that half of the [non-hazardous waste burning] cement kilns are controlled by ESPs, the other half by fabric filters..." (*Portland Cement NESHAP Response to Comments Document*, page 134, August 16, 1999).
- In its defense of the PM Maximum Achievable Control Technology (MACT) standards, the U.S. EPA stated, in the Portland Cement NESHAP final rule, that "EPA evaluated the MACT floor technology for both existing and new sources at proposal and determined that the MACT floor technology is properly designed and operated [fabric filters] and ESPs. Commenters provided no data to support that an alternative design or technology represents a floor that could achieve a lower level of PM emissions on a consistent basis." (*National Emission Standards for Hazardous Air Pollutants for Source Categories; Portland Cement Manufacturing Industry; Final Rule*, 63FR31916, June 14, 1999).
- A search of the U.S. EPA's RACT/BACT/LAER Clearinghouse database (<http://cfpub.epa.gov/RBLC/htm/bl02.cfm>) was performed to identify permit and Best Available Control Technology determinations of ESPs for control of PM emissions from cement kilns. According to U.S. EPA, the RBLC database contains "case-specific information on the "Best Available" air pollution technologies that have been required to reduce the emission of air pollutants from stationary sources." For permits issued since 1991, other than Mountain Cement Company, the RBLC database indicated that ESPs were permitted at cement kilns at the following cement manufacturers: Lehigh Cement Company (Iowa, Permit # 17-01-005), Alamo Cement Company (Texas, permit # PSD-TX-145 M1), Lone Star Industries, Inc. (Indiana, permit # 133-10159), Lone Star Industries (Indiana, permit # 133-5886-0002-3241), Florida Rock Industries (Florida, permit # PSD-

FL-228), Roanoke Cement Company (Virginia, permit # 20232), Holnam, Inc. (Utah, permit # DAQE-558-92), and Carolina's Cement Company (North Carolina, permit # 7300). RBLC database search results are provided in **Attachment A**.

- According to U.S. EPA (40CFR52.21) "*Best available control technology* means an emissions limitation (including a visible emission standard) based on the maximum degree of reduction for each pollutant subject to regulation under Act which would be emitted from any proposed major stationary source or major modification which the Administrator, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant."
- The Florida Department of Environmental Protection (DEP) currently is in the process of issuing a permit to Florida Rock Industries (FRI) for a new preheater/precalciner cement kiln with in-line raw mill (Line 2) controlled by an ESP at FRI's Newberry Plant in Alachua County Florida. The draft permit (0010087-013-AC, PSD-FL-350) is presented in **Attachment B**. The permit requires an ESP to control PM emissions from the in-line kiln/raw mill, based on a BACT determination made by the Florida DEP (see permit Section III. Emission Units Specific Conditions, Subsection B, State Requirements, Operational Requirements, 14. Emissions Unit 010).
- In its BACT determination for the Florida Rock Industries proposed Line 2 at FRI's Newberry Plant, the Florida DEP found that "Common control devices for controlling emissions of particulate matter at cement plants are fabric filters (baghouses) and electrostatic precipitators (ESPs). Baghouses and ESPs are generally considered equivalent for particulate control. Both types of devices can achieve removal efficiencies of over 99%. ESPs and baghouses are used extensively as control devices at cement plants." In addition, the Florida DEP confirms our RBLC database search results in that "A review of the BACT/LAER Clearinghouse shows that baghouses and ESPs are widely used to control particulate matter from process emission units at cement plants. Both offer an essentially equivalent level of control and are commonly accepted as BACT." (*Best Available Control Technology Determination (BACT), Florida Rock Industries, Inc. Newberry Plant, PSD-FL-350, Air Permit 0010087-013-AC, Alachua County, page BD-15, see Attachment C*)
- In its analysis for developing the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Portland Cement industry, the U.S. EPA found that "The data ... show equivalent performance can be expected from [fabric filters] and ESPs, and that neither technology offers a clear advantage." (*National Emission Standards for Hazardous Air Pollutants; Proposed Standards for*

Hazardous Air Pollutants for the Portland Cement Manufacturing Industry; Proposed Rule, 63FR14199, March 24, 1998).

- Because ESPs and fabric filter systems show equivalent performance, it would be speculative to assert significantly higher particulate control from a fabric filter system. Even assuming 20 tons of additional particulate control from a fabric filter system, the cost (estimated to be about \$35,000/ton) of controlling this assumed incremental amount of PM by using a fabric filter system in place of an ESP would be greater than levels that have been deemed cost effective by regulators. This estimate assumes a capital cost of \$3,500,000, an annual operating and maintenance cost of \$300,000, and a capital recovery factor of 0.1147.
- Facility-specific Permit Condition F8 (of Mountain Cement Company Operating Permit 31-098) requires stack tests using EPA Method 5 to show compliance with the Kiln #2 stack particulate emissions specified in condition F5.
- Stack tests have been performed by Mountain Cement to determine the PM emissions from the Kiln #2 stack. Stack test reports listed in **Attachment D** have been reviewed. All stack test results for Kiln #2 are below the permit limits for particulate matter.
- Two of the three more recent stack tests performed over the nine months from November 25, 2003 to September 3, 2004 had kiln production data recorded in the stack test reports. These production data are used to confirm that the stack test was performed at near plant capacity. Results from the two Kiln #2 stack tests assessed here are found in: *Source Emissions Testing Report for Mountain Cement Company, Laramie, Wyoming, Kiln #2 Particulate Matter, Test date: September 3, 2004* (performed by Air Pollution Testing, Inc.) and *Kiln #2 Particulate Test Report, Mountain Cement Company, Laramie, Wyoming* (dated January 2, 2004, performed by Retec).
- Based on results from PM stack tests performed on September 3, 2004 and November 25, 2003 (see **Attachment E**), the measured Kiln #2 PM emission rates were 5.94 lb/hr (0.0028 gr/acf) and 5.50 lb/hr (0.0024 gr/acf). These measured emission rates are well below the PM permit limit of 29.30 lb/hr (Operating Permit 31-098). The kiln feed rates reported during the stack testing were 98.5 tph and 90 tph, respectively. Based on the Kiln #2 modification application dated April 6, 1987 (i.e., 97.66 tph feed relates to 1500 tpd clinker production; see page 3 of April 6, 1987 application), these reported kiln feed rates are representative of Kiln #2 at near full production.
- Based on results from PM stack tests performed on September 3, 2004 and November 25, 2003 (see **Attachment E**), the measured flowrates ranged from 241,995 acfm to 246,762 acfm for the September 3, 2004 stack test, and the measured flowrates ranged from 261,029 acfm to 272,858 acfm for the November

25, 2003 stack test. These measured flowrates, near full production, are not that different from the original ESP design value (246,000 acfm, see letter from MikroPul Corporation to Monolith Cement Company, dated November 30, 1978).

- According to the Wyoming Air Quality Standards and Regulations (WAQSR Chapter 2, Section 2), the PM₁₀ AAQS is defined as “**PM₁₀**: The ambient air standards for PM₁₀ particulate matter are:
 - (i) 50 micrograms per cubic meter--annual arithmetic mean;
 - (ii) 150 micrograms per cubic meter--24-hour average concentration with not more than one expected exceedence per year.
 - (iii) Attainment of the annual and 24-hour standards is determined in accordance with Appendix K of 40 CFR part 50.”

These State standards are equivalent to the National Ambient Air Quality Standards.

- The Clean Air Act, which was last amended in 1990, requires U.S. EPA to set National Ambient Air Quality Standards (NAAQS) for wide-spread pollutants considered harmful to public health and the environment. The Clean Air Act established two types of national air quality standards. Primary standards set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings. The Clean Air Act requires periodic review of the science upon which the standards are based and the standards themselves.

EPA has set NAAQS for six principal pollutants; one is PM₁₀, particulate matter with a diameter of 10 microns or less. Particles less than 10 microns in diameter pose a health concern because they can be inhaled into and accumulate in the respiratory system. Both an annual and a 24-hr NAAQS have been set by U.S. EPA for PM₁₀.

- The Wyoming Department of Environmental Quality reports ambient PM₁₀ monitoring results for three sites in Laramie, Wyoming. One site (Site ID 56-001-006) is at 406 Iverson, about 5 km north of Mountain Cement. Monitoring is enhanced around the Mountain Cement facility. There are two monitoring sites near Mountain Cement. One site (Site ID 56-001-0801) is about 0.5 km north of the plant, and the other site (Site ID 56-001-0800) is about 0.7 km to the east of the plant.
- The Laramie, Wyoming area has and continues to attain the PM₁₀ Ambient Air Quality Standard according to U.S. EPA (<http://www.epa.gov/oar/oaqps/greenbk/pncs.html#WYOMING>; see **Attachment F**).

- The PM₁₀ monitoring data for Laramie, Wyoming has been reviewed. A summary of the PM₁₀ monitoring results for 1999 through 2004 is given in **Attachment G**. In the six years of monitoring data reviewed, there is only one daily value (on December 16, 2002) that is above the 24-hr PM₁₀ NAAQS level (see **Attachment H**). The Wyoming DEQ stated in a Mountain Cement Company Facility Inspection Report (September 13, 2004 inspection, see **Attachment I**) that this measured high PM₁₀ level "...most likely occurred during a high wind event." The Wyoming DEQ did not recommend any further action. In U.S. EPA's "Natural Events" policy (**Attachment J**), the EPA states that it is appropriate to "...exclude PM₁₀ air quality data that are attributable to uncontrollable natural events from decisions regarding an area's attainment status." The EPA policy defines "high wind events" as a relevant natural event.
- According to the Mountain Cement quarterly report, on December 16, 2002, the opacity at Kiln #2 was greater than 20% only for 5 six-minute periods. The values ranged from 20.1% to 30.1% opacity (*Mountain Cement Company's Fourth Quarter, 2002 Excess Emissions Report*, Kiln #2 Form C, page 8, see **Attachment K**).
- Based on my review of the PM₁₀ ambient monitoring data and Mountain Cement Company's excess opacity reports for Kiln #2, days having higher levels or much longer periods of excess opacity have not resulted in levels of monitored PM₁₀ concentration above the 24-hr PM₁₀ NAAQS level. For example, on July 25, 2002, Mountain Cement Company reported (see **Attachment L**) excess opacity values for 55 six-minute periods (5.5 cumulative hours). The opacity values ranged from 20% to 100%: 49% of the reported periods had opacities greater than or equal to 50%, 27% of the periods had opacities greater than or equal to 80%, and three periods had opacities at 100%. The winds this day were towards the monitors for the majority of the times of reported excess opacity. On this day, the two monitors near the plant measured 24-hr PM₁₀ concentrations of 25 µg/m³ and 33 µg/m³, respectively; well below the 24-hr PM₁₀ NAAQS level of 150 µg/m³ (U.S. EPA Air Quality System Report for 2002 for Site IDs 56-001-0801 and 56-001-0800, see **Attachment M**).
- Mountain Cement follows the WAQSR Chapter 7, Section 3 Compliance Assurance Monitoring (CAM) Requirements given in Operating Permit 31-098. The approved CAM plan is established to monitor and evaluate the operation of control measures so that the source remains in compliance with applicable requirements. This approach is consistent with EPA's intent for CAM. In the CAM Rule Preamble (October 3, 1997), EPA states that the approach in the CAM rulemaking is "...to establish monitoring for the purpose of: (1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements; (2) indicating any excursions from these ranges; and (3) responding to the data so that excursions are corrected. The

part 64 published today adopts this second approach as an appropriate approach to enhancing monitoring in the context of title V permitting for significant emission units that use control devices to achieve compliance with emission limits.”

3. Qualifications and Compensation

- My resume is given in **Attachment N**.
- My fee as an expert witness is \$240 per hour, and \$160 per hour for travel.
- I have authored/co-authored nine technical papers in the past 10 years. References to these papers are provided in **Attachment O**.
- I have not testified as an expert in the last four years at trial or a deposition.
- I declare under penalty of perjury that the statements in this report are true and accurate to the best of my knowledge, and that the attachments to this report represent true and accurate copies of the originals.

August 13, 2005
Dated

Roger P Brower
Roger Brower

Attachments to Expert Report of Roger Brower
August 13, 2005

- Attachment A: Results of searching U.S. EPA's RACT/BACT/LAER Clearinghouse database for permitting/PSD/BACT decisions relating to Portland cement kilns using ESPs for particulate matter control.
- Attachment B: Florida Rock Industries draft permit no. 0010087-013-AC, PSD-FL-350
- Attachment C: Best Available Control Technology Determination (BACT), Florida Rock Industries, Inc. Newberry Plant, PSD-FL-350, Air Permit 0010087-013-AC, Alachua County, page BD-15.
- Attachment D: Listing of stack test reports.
- Attachment E: Results from stack tests on September 3, 2004 and November 25, 2003.
- Attachment F: U.S. EPA Green Book (attainment status) for Wyoming particulate matter attainment status.
- Attachment G: Summary of PM₁₀ ambient monitoring in Laramie, Wyoming for 1999 through 2004.
- Attachment H: U.S. EPA Air Quality System Report for 2002 for Site ID 56-001-0801.
- Attachment I: WDEQ Air Quality Division Facility Inspection Report -- FY 2004 for Mountain Cement Company (September 13, 2004 inspection).
- Attachment J: U.S. EPA memo entitled "Areas Affected by PM-10 Natural Events".
- Attachment K: Mountain Cement Company's Fourth Quarter, 2002 Excess Emissions Report, Kiln #2 Form C, page 8.
- Attachment L: Mountain Cement Company's Third Quarter, 2002 Excess Emissions Report, Kiln #2 Form C, pages 3 and 4.
- Attachment M: U.S. EPA Air Quality System Report for 2002 for Site IDs 56-001-0801 and 56-001-0800.

Attachment N: Resume of Roger Brower.

Attachment O: References of authored/co-authored technical papers.

Roger Brower Expert Report

Attachment A

Biodiversity Conservation Alliance & Sierra Club v.
Mountain Cement Co., Case No. 04CV 361-B
August 13, 2005

COMPREHENSIVE REPORT Report Date: 06/28/2005

Facility Information

RBL C ID:	IA-0070 (final)	Date Determination	01/16/2004
Corporate/Company Name:	LEHIGH CEMENT COMPANY	Last Updated:	
Facility Name:	LEHIGH CEMENT COMPANY - MASON CITY PLANT	Permit Number:	17-01-005
Facility Contact:	VERNE STUESSY 641-421-3456 VSTUESSY@LEHIGHCEMENT.COM	Permit Date:	12/11/2003 (actual)
Facility Description:	PLEASE NOTE THAT A WET SCRUBBER WAS ADDED FOR BACT WHICH RESULTS IN A NET DECREASE IN PLANT EMISSIONS OF SO2 OF AROUND 5,400 TONS/YR. THE TABLE BELOW DOES NOT ALLOW NEGATIVE NUMBERS.	FRS Number:	110000767705
		SIC Code:	3241
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	NAICS:	32731
EPA Region:	7		
Facility County:	CERRO GORDO		
Facility State:	IA		
Facility ZIP Code:	50401		
Permit Issued By:	IOWA DEPARTMENT OF NATURAL RESOURCES (Agency Name) MR. GARY SMITH (Agency Contact) (515) 281-4635 GARY.SMITH@DNR.STATE.IA.US		
Other Agency Contact Info:	CHRISTOPHER A. ROLING 7900 HICKMAN RD, SUITE 1 URBANDALE, IA 50322 515-242-6002		
Other Permitting Information:	project number 2003-490		

Process/Pollutant Information

PROCESS NAME: KILN/CALCINER/PREHEATER**Process Type:** 90.028 (Portland Cement Manufacturing)**Primary Fuel:** COAL**Throughput:** 150.00 T/H**Process Notes:** Throughput is 1 clinker/h**POLLUTANT NAME: PM CAS Number: PM****Emission Limit 1:** 0.5160 LB/T LB/TON OF CLINKER**Emission Limit 2:****Standard Emission:** 0.5160 LB/T**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown**Case-by-Case Basis:** BACT-PSD**Other Applicable Requirements:****Control Method:** (A) ESP.**Est. % Efficiency:****Compliance Verified:** Unknown**Pollutant/Compliance Notes:** The BACT limit includes both front & back half emissions. THE NSPS LIMIT OF 0.3 LB/TON OF KILN FEED ALSO APPLIES.**POLLUTANT NAME: PM10 CAS Number: PM****Emission Limit 1:** 0.5160 LB/T LB/TON OF CLINKER**Emission Limit 2:****Standard Emission:** 0.5160 LB/T**Did factors, other than air pollution technology considerations influence the BACT decisions:** Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable Requirements:

Control Method:

(A) ESP.

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

All PM10 limits include both front & back half emissions. THERE IS ALSO A NAAQS LIMIT OF 77.4 LB/HR.

POLLUTANT

CAS Number: VE

NAME: VE

Emission Limit 1:

15.0000 % OPACITY

Emission Limit 2:

Standard Emission:

15.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable Requirements:

Control Method:

(A) ESP.

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

THE NESHAP LIMIT OF 20% ALSO APPLIES. The BACT limit has an averaging period of 1 hr while the NSPS is averaged over 6 minutes.

POLLUTANT

CAS Number: 7446-09-5

NAME: SO2

Emission Limit 1:

1.0100 LB/T LB/TON OF CLINKER

Emission Limit 2:

530.3000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) WET SCRUBBER.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

The lb/ton BACT limit is a 30 day rolling avg that does not include emissions from startup, shutdown, or malfunction (SSM). The ton/yr BACT limit is for all emissions including SSM. THE ADDITION OF THE WET SCRUBBER WILL REDUCE THE OVERALL SO2 EMISSIONS AT THE PLANT BY ABOUT 5,400 TONS/YR. THERE IS ALSO A NAAQS LIMIT OF 458.17 LB/HR (3 HR AVG)

POLLUTANT CAS Number: 10102

NAME: NOX

Emission Limit 1: 2.8500 LB/T LB/TON OF CLINKER

Emission Limit 2: 1496.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (B) SNCR, LOW NOX BURNERS, COMBUSTION CONTROLS, AND PROPER KILN DESIGN.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

The lb/ton BACT limit is a 30 day rolling avg that does not include emissions from startup, shutdown, or malfunction (SSM). The ton/yr limit includes all emissions including SSM. THERE IS A NAAQS LIMIT OF 427.5 LB/HR (CALENDAR MONTH AVG).

POLLUTANT CAS Number: 630-08-0

NAME: CO

Emission Limit 1: 3.7000 LB/T LB/TON OF CLINKER

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) PROPER KILN DESIGN AND OPERATION.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: THERE IS ALSO A NAAQS LIMIT (INSIGNIFICANCE) OF 1.020 LB/HR.

Process/Pollutant Information

PROCESS CLINKER COOLER

NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput: 150.00 T/H

Process Notes: Throughput is t/h raw feed

POLLUTANT **CAS Number:** PM
NAME: PM

Emission Limit 1: 0.0150 GR/DSCF

Emission Limit 2:

Standard Emission: 0.1000 LB/T

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

COMPREHENSIVE REPORT Report Date: 06/28/2005

Facility Information

RBLC ID: TX-0355 (final)

Corporate/Company Name: ALAMO CEMENT COMPANY II, LTD

Facility Name: PORTLAND CEMENT MANUFACTURING PLANT

Facility Contact: LARRY ALEXANDER 2102081947

Facility Description:

THIS PORTLAND CEMENT MANUFACTURING PLANT USES THE DRY PROCESS AND A SINGLE KILN. THE RAW MATERIALS ARE FINELY GROUND AND BLENDED IN A DRY STATE PRIOR TO BEING FED THROUGH THE PREHEATER/CALCINER TOWER LOCATED AT THE FEED-END OF THE ROTARY CEMENT KILN. IN THIS PROCESS HOT COMBUSTION AIR EXITING THE KILN IS USED TO PREHEAT AND PRE-CALCINE THE FINELY GROUND FEEDSTOCK IN THE MULTI-STAGE TOWER BEFORE ENTERING THE FEED-END OF THE KILN. LIKEWISE, HOT GASES FROM THE PREHEATER/CALCINER SECTION ARE ROUTED TO THE IN-LINE RAW MATERIAL ROLLER MILL WHERE FURTHER PREHEATING OCCURS AND EXCESS MOISTURE IS DRIVEN FROM THE FEED STOCK. THE EXHAUST GASES THEN EXIT THE ROLLER MILL AND A DUST COLLECTOR PRIOR TO BEING EMITTED THROUGH AN EXHAUST STACK. HEAT FOR THE KILN IS PROVIDED BY COAL/COKE AND NATURAL GAS. IN THE KILN, THE MATERIAL CHEMICALLY CHANGES DUE TO FURTHER CALCINING AND THE SEMI-AQUTEN FEEDSTOCK TAKES THE FORM OF SMALL SOLID BALLS KNOWN AS 'CLINKER' AS IT PASSES THROUGH THE KILN. THE CLINKER EXITS INTO A CLINKER COOLER, WHICH IS THEN CRUSHED AND INTER-GRINDED WITH GYPSUM TO FORM PORTLAND CEMENT. THE FINISHED CEMENT IS STORED IN SILOS AND THEN EITHER BAGGED OR SHIPPED IN BULK.

Permit Type: D: Both B (Add new process to existing facility) & C (Modify process at existing facility)

Date Determination 01/05/2005
Last Updated:

Permit Number: PSD-TX-145 M1

Permit Date: 06/29/2001 (actual)

FRS Number: 110017421002

SIC Code: 3241

NAICS: 32731

EPA Region:

6

Facility County:

BEXAR

Facility State:

TX

Facility ZIP Code:

78265

Permit Issued By:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) (Agency Name)
MR. JOHNNY VERMILLION (Agency Contact) (512)239-1292 JVERMILL@TCEQ.STATE.TX.US

Other Agency Contact Info:

MICHAEL D. GOULD
TX
(512) 239-1097

Other Permitting Information:

THIS PROJECT WAS SUBMITTED TO RECONCILE A PSD RETROACTIVE REVIEW FOR CO. ADDITIONAL STATE PERMITTING ACTIONS WILL INCLUDE AN AMENDMENT FOR INCREASES IN EMISSION ALLOWABLES FOR CO, VOC, HCL AND H2SO4. THERE IS NO NEW CONSTRUCTION AS A RESULT OF THIS AMENDMENT AND PSD RECONCILIATION. IN JANUARY 2000 THE COMPANY SUBMITTED A COMBINED APPLICATION FOR STATE AMENDMENT (TO ADD A RAW MILL) AND FOR A STATE MANDATED PERMIT RENEWAL. AT THAT TIME, THE COMPANY IDENTIFIED 1932 T/YR OF CO AND 63 T/YR OF VOCs THAT HAD NEVER BEEN PERMITTED OR IDENTIFIED. BEFORE THE PERMIT COULD BE RENEWED, THE STATE REQUIRES, IN SOME CASES, AN AMENDMENT TO ADD THE EMISSIONS AND SOURCES NOT PREVIOUSLY IDENTIFIED. SINCE THE QUANTITY OF CO EMISSIONS BEING PROPOSED TRIGGERED THE PSD SIGNIFICANCE LEVEL, A RETROACTIVE PSD REVIEW IS NECESSARY. ORIGINALLY, THE COMPANY WAS ISSUED A PSD PERMIT BY EPA IN JUNE 1979 FOR SO2, NOX, AND PM. THE PSD PERMIT WAS AMENDED IN 12/1983 FOR INCREASES IN NOX, PM, AND SO2. QUANTITIES OF CO AND VOCs HAD NEVER BEEN IDENTIFIED.

Process/Pollutant Information

PROCESS QUARRYING, Q-1
NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput:

Process Notes: FUGITIVE EMISSIONS ARE AN ESTIMATE ONLY. ON-SITE QUARRYING IS LIMITED TO 2,000,000 T/YR.

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: GRINDING/ PREHEATING/ KILN, K-19

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput:

Process Notes:

ADDITIONAL APPLICABLE SCC CODES: 30500622 & 30500613. EMISSION RATES FOR THE KILN ARE BASED ON A MAXIMUM CLINKER PRODUCTION OF 124 T/H. THE TWO GRINDING MILLS SHALL NOT EXCEED A PRODUCTION OF 240 T/H COMBINED OF PROCESSED MATERIAL. EMISSIONS FROM K-19 MUST COMPLY WITH NSPS SUBPART F.

POLLUTANT

CAS Number: PM

NAME: PM

FILTERABLE

Emission Limit 1: 32.2400 LB/H

Emission Limit 2: 135.4100 T/YR

Standard Emission: NOT AVAILABLE

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: UNKNOWN

Pollutant/Compliance Notes: EMISSIONS ARE LISTED AS PM/PM10 (FILTERABLE)

POLLUTANT **CAS Number: PM**
NAME: PM

Emission Limit 1: 36.3300 LB/H

Emission Limit 2: 152.5900 T/YR

Standard Emission: NOT AVAILABLE

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: UNKNOWN

Pollutant/Compliance Notes: EMISSIONS ARE LISTED AS PM/PM10 (TOTAL)

POLLUTANT **CAS Number: PM**
NAME: PM10

Emission Limit 1: 40.0000 LB/H

Emission Limit 2: 168.0000 T/YR

Standard Emission: NOT AVAILABLE

Did factors, other than air pollution technology considerations influence the BACT decisions: U

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: UNKNOWN

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 10102

NAME: NOX

Emission Limit 1:

660.0000 LB/H

Emission Limit 2:

2772.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

Other Case-by-Case

Other Applicable

Requirements:

Control Method:

(N) NONE INDICATED

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 7446-09-5

NAME: SO2

Emission Limit 1:

20.0000 LB/H

Emission Limit 2:

84.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

Other Case-by-Case

Other Applicable

Requirements:

Control Method:

(N) NONE INDICATED

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** VOC
NAME: VOC

Emission Limit 1: 15.0000 LB/H

Emission Limit 2: 63.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) NONE INDICATED

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** 630-08-0
NAME: CO

Emission Limit 1: 460.0000 LB/H

Emission Limit 2: 1932.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) GOOD COMBUSTION PRACTICES AND GOOD COMBUSTION UNIT DESIGN.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** 7647-01-0

NAME: HCL

Emission Limit 1: 2.0000 LB/H

Emission Limit 2: 8.7600 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) NONE INDICATED

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** 7664-93-9

NAME: H2SO4

Emission Limit 1: 2.0000 LB/H

Emission Limit 2: 8.4000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (N) NONE INDICATED

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** VE

NAME: VE

Emission Limit 1: 20.0000 % OPACITY

Emission Limit 2:

Standard Emission: 20.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A

Other Applicable Requirements: NSPS

Control Method: (N) NONE INDICATED

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS NAME: BLENDING SILO, F-11

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput:

Process Notes: EMISSIONS WERE LISTED UNDER BLENDING SILO BAGHOUSE IN THE PERMIT, BUT ARE REORGANIZED HERE TO DEMONSTRATE THAT THE BAGHOUSE IS A CONTROL DEVICE.

POLLUTANT NAME: PM **CAS Number:** PM

Emission Limit 1: 1.0300 LB/H

Emission Limit 2: 4.3200 T/YR

COMPREHENSIVE REPORT Report Date: 06/28/2005

Facility Information

RBLC ID:	IN-0081 (final)	Date Determination	03/10/2004
Corporate/Company Name:	LONE STAR INDUSTRIES, INC.	Last Updated:	
Facility Name:	LONE STAR INDUSTRIES, INC.	Permit Number:	133-10159
Facility Contact:		Permit Date:	04/16/1999 (actual)
Facility Description:		FRS Number:	110017416241
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	SIC Code:	3241
EPA Region:	5	NAICS:	32731
Facility County:	PUTNAM		
Facility State:	IN		
Facility ZIP Code:	46135		
Permit Issued By:	INDIANA DEPT OF ENV MGMT, OFC OF AIR (Agency Name) MRS. KATHY MOORE (Agency Contact) (317)233-0871 KMOORE@IDEM.IN.GOV		
Other Agency Contact Info:	MICHELE WILLIAMS IN (317) 233-0863		
Other Permitting Information:	THIS PERMIT SUPERCEDES PREVIOUS PSD APPROVALS (CP-133-5886). THE PROPOSED PROJECT FOR CP-133-5886 WAS NEVER CONSTRUCTED. THE COMPANY IS MODIFYING THE EXISTING DRY PROCESS KILN (2600 TONS CLINKER/DAY TO A SEMI-DRY PROCESS KILN (4400 TONS CLINKER/DAY). THIS SOURCE MODIFICATION FOR LONE STAR INDUSTRIES, INC., RELATES TO THE MODIFICATION OF THE WET PROCESS CEMENT KILN WITH A CLINKER PRODUCTION CAPACITY OF 2600 TONS PER DAY TO A SEMI-DRY PROCESS CEMENT KILN WITH A CLINKER PRODUCTION CAPACITY OF 4400 TONS PER DAY AND ITS ASSOCIATED OPERATIONS.		

Process/Pollutant Information

Other Applicable Requirements:

(A) FABRIC FILTER

Control Method:

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

PERMIT LIMITS THE SAME FOR FILTERABLE PM AND FILTERABLE PM-10.

Process/Pollutant Information

PROCESS NAME: CEMENT MANUFACTURING, KILN OPERATION

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel: COAL

Throughput: 360.00 T/H

Process Notes: ONE HAMMERMILL DRYER, ONE CALCINER TOWER (451 MMBTU/HR), AND SEMI-DRY PROCESS KILN (376 MMBTU/HR) AND BYPASS SYSTEM. THROUGHPUT IN TONS RAW FEED PER HOUR, ALSO 183 TONS CLINKER/HR SO₂, NO_X, AND CO EMISSIONS DECREASE AS A RESULT OF THIS MODIFICATION FROM A WET KILN TO A SEMI-DRY KILN.

POLLUTANT NAME: VE **CAS Number:** VE

Emission Limit 1: 20.0000 % OPACITY

Emission Limit 2: 0.3000 LB/T

Standard Emission: 20.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A

Other Applicable Requirements: NSPS

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: Y

Pollutant/Compliance Notes:

POLLUTANT CAS Number: PM
NAME: PM10

Emission Limit 1: 0.0140 GR/DSCF

Emission Limit 2: 88.7000 LB/H

Standard Emission: 0.3000 LB/T

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: Y

Pollutant/Compliance Notes:

POLLUTANT CAS Number: PM
NAME: PM
FILTERABLE

Emission Limit 1: 0.0160 GR/DSCF

Emission Limit 2: 91.3000 LB/H

Standard Emission: 0.3000 LB/T

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified:

Y

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 7446-09-5

NAME: SO2

Emission Limit 1: 3317.0000 T/YR

Emission Limit 2: 1.0100 LB/MMBTU

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

Control Method: (N)

Est. % Efficiency:

Compliance Verified:

Y

Pollutant/Compliance Notes: Additional limit: 4.13 lb/t

POLLUTANT CAS Number: 10102

NAME: NOX

Emission Limit 1: 4428.0000 T/YR

Emission Limit 2: 5.4700 LB/T clinker

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

Control Method: (P) LOW NOX CALCINER, GOOD COMBUSTION PRACTICES

Est. % Efficiency:

Compliance Verified:

Y

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 630-08-0

NAME: CO

Emission Limit 1:

2930,0000 T/YR

Emission Limit 2:

3.6500 LB/T clinker

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable
Requirements:

Control Method:

(P) GOOD COMBUSTION PRACTICES

Est. % Efficiency:

Compliance Verified:

Y

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS CEMENT MFG., ALKALI BYPASS DUST TRANSFER EQUIP
NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput:

Process Notes: EMISSION POINTS BE 3-6, BE 3-8.

COMPREHENSIVE REPORT

Report Date: 08/12/2005

Facility Information

RBLC ID:	IN-0112 (final)	Date Determination	05/20/2004
Corporate/Company Name:	LONE STAR INDUSTRIES, INC.	Last Updated:	
Facility Name:	LONE STAR INDUSTRIES, INC.	Permit Number:	133-5886-00002-3241
Facility Contact:	DAVE PUZAN	Permit Date:	09/18/1998 (actual)
Facility Description:	PORTLAND CEMENT MANUFACTURING PLANT	FRS Number:	
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	SIC Code:	3241
EPA Region:	5	NAICS:	32731
Facility County:	PUTNAM		
Facility State:	IN		
Facility ZIP Code:	46135		
Permit Issued By:	INDIANA DEPT OF ENV MGMT, OFC OF AIR (Agency Name)		
	MRS. KATHY MOORE (Agency Contact) (317)233-0871 KMOORE@IDEM.IN.GOV		
Other Agency Contact Info:	MICHELE WILLIAMS		
	IN (317) 233-0863		

Other Permitting Information: Modification concerns the construction and operation of a wet process cement kiln. Existing facilities that will be modified include an increase of volume of limestone rock removed from the quarry from 600 to 1,100 t/h, an increase of rock crushing capacity.

Process/Pollutant Information

PROCESS NAME: CEMENT KILN, WET PROCESS, COAL

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel: COAL

Throughput: 75.00 T/H

Process Notes: Throughput is tons of clinker/hour, raw material feed rate: 135 t/h. Kiln uses 380 mmBtu/h coal, additional fuel, up to 15% heat input, may be whole, chopped, shredded, or crumbled tires.

POLLUTANT **CAS Number:** PM
NAME: PM

Emission Limit 1: 40.5000 LB/H

Emission Limit 2:

Standard Emission: 0.3000 LB/T lb/t of feed

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** PM
NAME: PM10

Emission Limit 1: 37.3000 LB/H

Emission Limit 2:

Standard Emission: 0.2800 LB/T calculated

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: VE

NAME: VE

Emission Limit 1: 20.0000 % OPACITY

Emission Limit 2:

Standard Emission: 20.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 7446-09-5

NAME: SO2

Emission Limit 1: 543.0000 LB/H

Emission Limit 2: 4.0300 LB/T lb/t feed

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) SULFUR CONTENT OF COAL SHALL NOT EXCEED 3 PERCENT SULFUR.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: emission limitation is equivalent to 1.43 lb/mmBtu

POLLUTANT CAS Number: 10102

NAME: NOX

Emission Limit 1: 471.0000 LB/H

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) LOW NOX BURNERS AND GOOD COMBUSTION

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: emissions equivalent to 1.24 lb/mmBtu

Process/Pollutant Information

PROCESS CEMENT KILN, WET PROCESS, TIRE FUEL
NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel: WASTE TIRES

Throughput: 75.00 T/H

Process Notes: Throughput is t clinker/h, raw material feed rate : 135 t/h. Waste tires may be used to supplement up to 15% of the heat input (380 mmBtu/h heat input for kiln)

COMPREHENSIVE REPORT Report Date: 08/12/2005

Facility Information

RBLC ID:	FL-0224 (final)	Date Determination	12/17/2003
Corporate/Company Name:	FLORIDA ROCK INDUSTRIES, INC.	Last Updated:	
Facility Name:	FLORIDA ROCK INDUSTRIES, INC.	Permit Number:	PSD-FL-228
Facility Contact:		Permit Date:	12/23/1996 (actual)
Facility Description:	PORTLAND CEMENT MANUFACTURING. 2650 TONS CLINKER PER DAY.	FRS Number:	110002533615
Permit Type:	A: New/Greenfield Facility	SIC Code:	3241
EPA Region:	4	NAICS:	32731
Facility County:	DUVAL		
Facility State:	FL		
Facility ZIP Code:	32206		
Permit Issued By:	FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION (Agency Name) MS. TERESA HERON (Agency Contact) (850)921-9529 teresa.heron@dep.state.fl.us		
Other Agency Contact Info:	TERESA HERON FL (850) 921-9529		
Other Permitting Information:	<p>FACILITY'S PHYSICAL LOCATION IS 2.5 MILES NE OF NEWBERRY, ALACHUA COUNTY. MODIFICATIONS: Construction permit modification (PSD-FL-228C and 0010087-006-AC) issued on December 11, 2002 to: 1. Increase daily and annual clinker production limits by approximately 12 percent and peak (hourly) production by approximately 20 percent. 2. Set (lower) the final NOX limitation at 2.45 lb/ton of clinker and the final SO2 limitation at 0.16 lb/ton of clinker. 3. Revise other emission limitations downward to avoid significant increases in allowable annual emissions. 4. Following completion of the quarterly testing program, remove the beryllium limit in accordance with guidance from EPA that removed beryllium as a pollutant regulated under the PSD program. 5. In a response to a request for additional information, FRI proposed final continuous emission monitoring and reporting protocols to complement the proposed NOX and SO2 limitations. Construction permit modification (PSD FL 228B and 0010087-004-AC) issued on August 20, 2001, to extend the permit expiration date to December 31, 2001, install VOC monitor, and install multi-stage combustion (MSC) calciner. Construction permit modification (PSD-FL-228A and 0010087-003-AC) issued on July 13, 2000, to add EPA Test Method 25A to measure volatile organic compounds (VOC) emissions.</p>		

Process/Pollutant Information

PROCESS NAME: KILN, PORTLAND CEMENT

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel: COAL

Throughput: 14,00 T/H

Process Notes: Clinker Production Rate: 110.2 T/H 24-hr rolling average, 115.0 T/H peak, 2650 Tons per day, 800,000 Tons per year. PREHEATER FEED RATE: 173 T/H, 24-hr rolling average 180 T/H, 1,360,000 Tons per year. OTHER SCC FOR PROCESS: 3-05-006-23 PREHEATER/ KILN PRECALCINER KILN. OTHER FUELS. Unused NO₂ FUEL OIL AND TRES. Heat Input: 364 MMBtu/h. COMPLIANCE NOTES: SO₂, NO_X = CEMS. CO = EPA METHOD 10. VOC = METHOD 25 OR 25A. VE = METHOD 9. PM = METHOD 5.

POLLUTANT NAME: PM **CAS Number:** PM

Emission Limit 1: 0.2000 LB/T CLINKER

Emission Limit 2:

Standard Emission: 0.2000 LB/T CLINKER

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) ESP.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: PM10 **CAS Number:** PM

Emission Limit 1: 0.2300 LB/T clinker

Emission Limit 2:

Standard Emission: 0.2300 LB/T CLINKER

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (A) ESP.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: Initial limit of 0.26 lb/ton clinker was reduced in 2002 to 0.23 lb/ton clinker.

POLLUTANT CAS Number: VOC

NAME: VOC

Emission Limit 1: 0.1100 LB/T CLINKER

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) COMBUSTION CONTROLS.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: Initial limit of 0.12 lb/ton clinker was reduced in 2002 to 0.11 lb/ton clinker.

POLLUTANT CAS Number: 7440-41-7

NAME: Beryllium

Emission Limit 1: see note

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (A) ESP

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: NO EMISSION RATE LIMIT; LIMIT AS CONTROLLED BY PM BACT

POLLUTANT CAS Number: 10102

NAME: NOX

Emission Limit 1: 2.4500 LB/T clinker, 30 day rolling avg

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) PROCESS CONTROL AND SECONDARY COMBUSTION OF FUEL.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes: Initial limit was set at 3.8 lb/ton clinker with a provision to reduce it to 2.8 lb/ton clinker after 2 years of operation. The permit was modified in 2002 reducing the limit to 2.45 lb/ton clinker with an average time of

30-day rolling average. CEMS for NOX.

POLLUTANT

CAS Number: 630-08-0

NAME: CO

Emission Limit 1:

2.5000 LB/T CLINKER

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable Requirements:

Control Method:

(P) COMBUSTION CONTROLS.

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

Initial limit of 3.6 lb/ton clinker was reduced in 2002 to 2.5 lb/ton clinker.

POLLUTANT

CAS Number: VE

NAME: VE

Emission Limit 1:

10.0000 % OPACITY

Emission Limit 2:

Standard Emission:

10.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable Requirements:

Control Method:

(A) ESP

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

POLLUTANT
NAME: SO2

CAS Number: 7446-09-5

Emission Limit 1:

0.1600 LB/T CLINKER

Emission Limit 2:

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable Requirements:

Control Method:

(P) FUEL S LIMITS AND PROCESS DESIGN LIMITS.

Est. % Efficiency:

Compliance Verified:

Unknown

Pollutant/Compliance Notes:

Initial limit of 0.28 lb/ton clinker was reduced in 2002 to 0.16 lb/ton clinker. FUEL LIMITS: COAL = 1.25% 5 BY WEIGHT; NO. 2 FUEL OIL = .05% 5 BY WEIGHT; TIRES = UP TO 30% OF HEAT INPUT. AND PROCESS DESIGN LIMITS ARE 24HR ROLLING AVERAGE, INTERIM LIMIT.

Process/Pollutant Information

PROCESS MATERIAL HANDLING, STORAGE, CONVEYANCE
NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput:

Process Notes: COMPLIANCE METHODS: PM, PM10: EPA METHOD 5 AND OR OPACITY EPA METHOD 9.

POLLUTANT **CAS Number:** VE
NAME: VE

Emission Limit 1: 5.0000 % OPACITY

Emission Limit 2:

COMPREHENSIVE REPORT

Report Date: 06/28/2005

Facility Information

RBLC ID:	VA-0272 (final)	Date Determination	01/12/2004
Corporate/Company Name:	ROANOKE CEMENT	Last Updated:	
Facility Name:	ROANOKE CEMENT	Permit Number:	20232
Facility Contact:	ROBERT OMER (540)966-1509 BOMER@ROANOKE-CEMENT.COM	Permit Date:	06/13/2003 (actual)
Facility Description:	CEMENT MANUFACTURING FACILITY	FRS Number:	110017420263
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	SIC Code:	3241
EPA Region:	3	NAICS:	32731
Facility County:	BOTETOURT		
Facility State:	VA		
Facility ZIP Code:			
Permit Issued By:	VIRGINIA ENVIRONMENTAL QUALITY AIR DIV (Agency Name) MS. MONICA A. HARVEY (Agency Contact) (804)698-4300 MAHARVEY@DEQ.VIRGINIA.GOV		
Other Agency Contact Info:	HEATHER JACKSON VA 540-562-6700		
Other Permitting Information:	#5 LIME KILN - BECAUSE OF THE HIGHER ORGANIC CONTENT OF THE AVAILABLE ROCK RAW MATERIAL CAUSING GREATER CO EMISSIONS, THE CO LIMIT FROM THE #5 LIME KILN SYSTEM WAS INCREASED FROM 1296 TONS/YR TO 1950 TONS/YR. THE SHORT TERM CO LIMIT HAS NOT CHANGED. NO PHYSICAL CHANGES WERE MADE AT THE FACILITY.		

Process/Pollutant Information

PROCESS LIME KILN
NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel: COAL

Throughput: 1300000.00 T/YR

Process Notes:

POLLUTANT CAS Number: PM
NAME: TSP

Emission Limit 1: 83.9000 LB/H

Emission Limit 2: 297.5000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

(B) ELECTROSTATIC PRECIPITATORS AND GOOD COMBUSTION PRACTICES.

Control Method:

Est. % Efficiency:

Unknown

Compliance Verified:

Pollutant/Compliance Notes:

POLLUTANT CAS Number: PM
NAME: PM10

Emission Limit 1: 71.3100 LB/H

Emission Limit 2: 252.8000 T/YR

Standard Emission: 0.3900 LB/T calculated

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

Control Method: (B) ELECTROSTATIC PRECIPITATORS AND GOOD COMBUSTION PRACTICES.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 7446-09-5

NAME: SO2

Emission Limit 1: 950.0000 LB/H

Emission Limit 2: 3104.4000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (P) LOW SULFUR FUEL, GOOD COMBUSTION PRACTICES, AND CONTINUOUS EMISSION MONITORING SYSTEM.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 10102-44-0

NAME: NO2

Emission Limit 1: 982.0000 LB/H

Emission Limit 2: 2850.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) GOOD COMBUSTIONS PRACTICES AND A CONTINUOUS EMISSION MONITORING SYSTEM

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** 630-08-0

NAME: CO

Emission Limit 1: 600.0000 LB/H

Emission Limit 2: 1950.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) GOOD COMBUSTION PRACTICES AND A CONTINUOUS EMISSION MONITORING SYSTEM.

Est. % Efficiency:

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT **CAS Number:** VOC

NAME: VOC

Emission Limit 1: 126.4000 LB/H

Emission Limit 2: 493.0000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

(P) GOOD COMBUSTION PRACTICES

Control Method:
Est. % Efficiency:

Unknown

Compliance Verified:
Pollutant/Compliance Notes:

POLLUTANT CAS Number: 7439-92-1

NAME: PB

Emission Limit 1: 0.1300 LB/H

Emission Limit 2: 0.4600 TYR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable
Requirements:

(P) GOOD COMBUSTION PRACTICES

Control Method:

Unknown

Est. % Efficiency:
Compliance Verified:
Pollutant/Compliance Notes:

POLLUTANT CAS Number: 7664-93-9

NAME: H2SO4 MIST

Emission Limit 1: 10.0000 LB/H

Emission Limit 2: 35.5000 T/YR

Standard Emission:

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements: (P) GOOD COMBUSTION PRACTICES
Control Method:
Est. % Efficiency:
Compliance Verified: Unknown
Pollutant/Compliance Notes:

Facility Information

RRLC ID:	VA-0283 (final)	Date Determination Last Updated:	06/28/2004
Corporate/Company Name:	Roanoke Cement Company	Permit Number:	VA-20232
Facility Name:	ROANOKE CEMENT	Permit Date:	06/13/2003 (actual)
Facility Contact:		FRS Number:	110017422270
Facility Description:	CEMENT MANUFACTURING	SIC Code:	3241
Permit Type:	D: Both B (Add new process to existing facility) & C (Modify process at existing facility)	NAICS:	32731
EPA Region:	3		
Facility County:	BOTETOURT		
Facility State:	VA		
Facility ZIP Code:	24175		
Permit Issued By:	VIRGINIA ENVIRONMENTAL QUALITY AIR DIV. (Agency Name) MS. MONICA A. HARVEY (Agency Contact)		
Other Agency Contact Info:	JOHN REINHARDT VA (804) 527-5012		

Facility Information

RBL C ID:	VA-0223 (final)	Date Determination	08/30/2002
Corporate/Company Name:	ROANOKE CEMENT COMPANY	Last Updated:	
Facility Name:	ROANOKE CEMENT COMPANY	Permit Number:	20232
Facility Contact:	ARIS PAPADOPOULOS	Permit Date:	07/26/1994 (actual)
Facility Description:		FRS Number:	110017420263
Permit Type:	A: New/Greenfield Facility	SIC Code:	3241
EPA Region:	3	NAICS:	32731
Facility County:	BOTETOURT		
Facility State:	VA		
Facility ZIP Code:	24077-		
Permit Issued By:	VIRGINIA ENVIRONMENTAL QUALITY AIR DIV. (Agency Name) DR. MICHAEL SCANLAN (Agency Contact) (540) 562-6700 MISCANLAN@DEQ.VIRGINIA.GOV		
Other Agency Contact Info:	RAY GOETZ VA (540) 562-6763		
Other Permitting Information:	1. MODIFY & EXPAND #5 PORTLAND CEMENT KILN & CLINKER COOLER. CHANGE STACKS. ADD A FOURTH ESP. CHANGE FUNCTIONS OF EXISTING 3 ESPS. KILN CHANGES FROM A TRAVELING GRATE TO A SIX STAGE PREHEATER/PRECALCINER DESIGN. # 5 KILN SYSTEM CAPACITY WILL INCREASE FROM 69.8 TPH/550,300 TPY TO 131 TPH/950,000 TPY OF CEMENT CLINKER PRODUCED. CAPACITY WILL BE 393,000,000 BTU/HR. 2. ALL 4 OF THE OLD CEMENT KILNS WILL BE SHUT DOWN. OVERALL PLANT CAPACITY WILL REDUCE FROM 1,100,000 TPY TO		

950,000 TPY CLINKER. 3. THERE WILL BE NO INCREASE OF ANY POLLUTANTS, EVEN TOXICS FROM THE OVERALL PLANT DUE TO SHUT DOWN OF 4 KILNS.

Process/Pollutant Information

PROCESS #5 KILN SYSTEM
NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput: 950000.00 T/YR

Process Notes: KILN IS SIX STAGE PREHEATER/PRECALCINER DESIGN. CAPACITY IS 131 T/H AND 950,000 T/YR OF CEMENT CLINKER PRODUCED. CAPACITY ALSO IS 393 MMBTU/H.

POLLUTANT CAS Number: PM
NAME: PM10

Emission Limit 1: 164,0000 T/YR

Emission Limit 2: 0

Standard Emission: 0.3450 LB/T

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A

Other Applicable Requirements: NSPS

Control Method: (A) ESP

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: PM
NAME: TSP

Emission Limit 1: 192.0000 T/YR

Emission Limit 2: 0

Standard Emission: 0.4040 LB/T

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: N/A

Other Applicable Requirements: NSPS

Control Method: (A) ESP

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: SO2 CAS Number: 7446-09-5

Emission Limit 1: 2370.0000 T/YR

Emission Limit 2: 0

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable Requirements:

Control Method: (P) PROCESS CONTROL

Est. % Efficiency: 80.000

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT NAME: N2O CAS Number: 10024-97-2

Emission Limit 1: 2850.0000 T/YR
Emission Limit 2: 0
Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable
Requirements:

Control Method: (P) PROCESS CONTROL/PRECALCINER PROCESS

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 630-08-0

NAME: CO

Emission Limit 1: 1200.0000 T/YR

Emission Limit 2: 0

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable
Requirements:

Control Method: (P) PROCESS CONTROL

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 16984-48-8
NAME: FL

Emission Limit 1: 0.5000 T/YR
Emission Limit 2: 0
Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable
Requirements:

Control Method: (P) PROCESS CONTROL

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 1305-78-8

NAME: CALCIUM
OXIDE

Emission Limit 1: 20.0000 T/YR

Emission Limit 2: 0

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable
Requirements:

Control Method: (A) ESP

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: 7440-39-3
NAME: BA

Emission Limit 1: 5.4000 T/YR

Emission Limit 2: 0

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable
Requirements:

Control Method: (A) ESP

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT CAS Number: VOC
NAME: VOC

Emission Limit 1: 493.0000 T/YR

Emission Limit 2: 0

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: Other Case-by-Case

Other Applicable
Requirements:

Control Method: (P) PROCESS CONTROL/PRECALCINER PROCESS

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 7664-93-9

NAME: H2SO4

Emission Limit 1: 35.5000 T/YR

Emission Limit 2: 0

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: ☐ Other Case-by-Case ☐

Other Applicable Requirements:

Control Method: (P) PROCESS CONTROL

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 95-52-4

NAME: DIPHENYL

Emission Limit 1: 14.2000 T/YR

Emission Limit 2: 0

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: ☐ Other Case-by-Case ☐

Other Applicable Requirements:

Control Method: (A) ESP

Est. % Efficiency: 0

Compliance Verified: Unknown

Pollutant/Compliance Notes:

COMPREHENSIVE REPORT
Report Date: 06/28/2005

Facility Information

RBL C ID:	UT-0046 (final)	Date Determination Last Updated:	12/18/2001
Corporate/Company Name:	HOLNAM, INC.	Permit Number:	DAQE-558-92
Facility Name:	HOLNAM, INC.	Permit Date:	04/05/1994 (actual)
Facility Contact:		FRS Number:	110012414128
Facility Description:		SIC Code:	3241
Permit Type:		NAICS:	
EPA Region:	8		
Facility County:	MORGAN		
Facility State:	UT		
Facility ZIP Code:	84050-		
Permit Issued By:	UTAH BUREAU OF AIR QUALITY (Agency Name) MR. TIM ANDRUS (Agency Contact) (801)536-4429		
Other Agency Contact Info:	CAROL HOLMES UT (801) 536-4000		
Other Permitting Information:			
Process/Pollutant Information			
PROCESS NAME:	CEMENT KILN, 2 EA		
Process Type:	90.006 (Cement Manufacturing (except 90.028))		

Primary Fuel:

Throughput: 550.00 TONS CLINKER/24 HR

Process Notes:

POLLUTANT **CAS Number:** PM
NAME: PM10

Emission Limit 1: 0.0160 GR/DSCF 68F,29.91NHG

Emission Limit 2: 5.0000 LB/HR

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) AIR FILTER ELECTROSTATIC PRECIPITATOR (ESP)

Est. % Efficiency: 99.940

Compliance Verified: Unknown

Pollutant/Compliance Notes:

Facility Information

RBL C ID: UT-0039 (final)

Corporate/Company Name: HOLNAM, INC.

Facility Name: HOLNAM, INC.

Facility Contact:

Facility Description:

Date Determination 12/18/2001

Last Updated:

Permit Number: DAQE-558-92

Permit Date: 06/15/1992 (actual)

FRS Number: 110012414128

SIC Code: 3241

Permit Type:

EPA Region:

Facility County:

Facility State:

Facility ZIP Code:

Permit Issued By:

Other Agency Contact Info:

Other Permitting
Information:

NAICS:

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MORGAN

UT

84050-

UTAH BUREAU OF AIR QUALITY (Agency Name)
MR. TIM ANDRUS (Agency Contact) (801)536-4429

CAROL HOLMES
UT

(801) 536-4000

Process/Pollutant Information

PROCESS CEMENT KILN, 2
NAME:

Process Type: 90.006 (Cement Manufacturing (except 90.028))

Primary Fuel:

Throughput: 550.00 TONS CLINKER/24 HR

Process Notes:

POLLUTANT **CAS Number:** PM
NAME: PM10

Emission Limit 1: 0.0160 GR/DSCF(68F,29.9)NHG

Emission Limit 2: 5.0000 LB/HR

Standard Emission: 0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:	
Control Method:	(A) AIR FILTER ELECTROSTATIC PRECIPITATOR (ESP)
Est. % Efficiency:	99.940
Compliance Verified:	Unknown
Pollutant/Compliance Notes:	

COMPREHENSIVE REPORT Report Date: 06/28/2005

Facility Information

RBL/C ID:	NC-0056 (Final)	Date Determination Last Updated:	10/17/2002
Corporate/Company Name:	CAROLINA'S CEMENT COMPANY, L.P.	Permit Number:	7300
Facility Name:	CAROLINA'S CEMENT COMPANY, L.P.	Permit Date:	08/06/1992 (actual)
Facility Contact:		FRS Number:	110017417008
Facility Description:		SIC Code:	3241
Permit Type:	A: New/Greenfield Facility	NAICS:	32731
EPA Region:	4		
Facility County:	NEW HANOVER		
Facility State:	NC		
Facility ZIP Code:			
Permit Issued By:	NORTH CAROLINA DIV OF ENV MGMT (Agency Name) MR. WILLIAM WILLETS (Agency Contact) (919) 715-6252		
Other Agency Contact Info:	DALE OVERCASH NC (919) 733-5083		
Other Permitting Information:	1. Design Capacity: 298 Mmbtu/h, 160 Tph Input Rate 77.9 Tph Clinker Produced 2. The Following Processes Have More Than One Unit (Although Emissions Have Been Reported per Unit): Homogenizing Silo: 3 Units Clinker Silo Loading: 2 Units Clinker Silo Discharge: 8 Units Finishing Mill: 2 Units Separator Operations: 2 Units Cement Silo: 2 Units		

Process/Pollutant Information

PROCESS NAME:	MATL TRANSFER/HAND, CONVEYOR/TRANSFER POINT
Process Type:	90.028 (Portland Cement Manufacturing)

PROCESS NAME: PREHEATER/CALCINER/KILN/CLINKER COOLER

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput: 298.00 MMBTU/H

Process Notes: ANNUAL PRODUCTION RATE IS 600,000 TONS DRY PROCESS CEMENT/YR. MAXIMUM RAW MATERIAL FEED RATE (LESS COAL) IS 173.6 T/YR.

POLLUTANT NAME: PM **CAS Number:** PM

Emission Limit 1: 45.4000 LB/H

Emission Limit 2: 198.9000 T/YR

Standard Emission: 0 NOT AVAILABLE

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable Requirements:

Control Method: (A) ELECTROSTATIC PRECIPITATOR (ESP)

Est. % Efficiency: 90.000

Compliance Verified: Y

Pollutant/Compliance Notes:

POLLUTANT NAME: PM10 **CAS Number:** PM

Emission Limit 1: 36.3000 LB/H

Emission Limit 2: 160.0000 T/YR

Standard Emission: 0 NOT AVAILABLE

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable
Requirements:

Control Method:

(A) ELECTROSTATIC PRECIPITATOR (ESP)

Est. % Efficiency:

99.910

Compliance Verified:

Y

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 7446-09-5

NAME: SO2

Emission Limit 1:

171.4000 LB/H

Emission Limit 2:

750.7000 T/YR

Standard Emission:

0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable
Requirements:

Control Method:

(P) ALKALINE DUST

Est. % Efficiency:

75.000

Compliance Verified:

Y

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 10102

NAME: NOX

Emission Limit 1:

548.0000 LB/H

Emission Limit 2:

2400.0000 T/YR

Standard Emission:

0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable
Requirements:

Control Method:

(P) COMBUSTION UNIT DESIGN

Est. % Efficiency:

0

Compliance Verified:

Y

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: 630-08-0

NAME: CO

Emission Limit 1:

311.0000 LB/H

Emission Limit 2:

1363.0000 T/YR

Standard Emission:

0

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable
Requirements:

Control Method:

(P) COMBUSTION UNIT DESIGN

Est. % Efficiency:

0

Compliance Verified:

Y

Pollutant/Compliance Notes:

POLLUTANT

CAS Number: VE

NAME: VE

Emission Limit 1:

10.0000 % OPACITY

Emission Limit 2:

0

Standard Emission:

10.0000 % OPACITY

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis:

BACT-PSD

Other Applicable

Requirements:

Control Method:

(A) ELECTROSTATIC PRECIPITATOR (ESP)

Est. % Efficiency:

0

Compliance Verified:

Y

Pollutant/Compliance Notes:

Process/Pollutant Information

PROCESS MATL TRANSFER/HAND, TRUCK UNLOADING
NAME:

Process Type: 90.028 (Portland Cement Manufacturing)

Primary Fuel:

Throughput: 771.61 T/H

Process Notes:

POLLUTANT CAS Number: PM
NAME: PM

Emission Limit 1: 0.0200 LB/H

Emission Limit 2: 0.0800 T/YR

Standard Emission: 0 NOT AVAILABLE

Did factors, other than air pollution technology considerations influence the BACT decisions: Unknown

Case-by-Case Basis: BACT-PSD

Other Applicable

Requirements:

Control Method: (P) WATER SPRAY

Est. % Efficiency: 90.000

Compliance Verified: Y